

### Claims

1. A method providing low-overhead integrated support for project information management for a user of a computer system, comprising the method steps of:
  - creating a memory storage containing individual descriptions of each project listed in
    - 5 a group of projects, each description comprising one or more properties, said properties selected from a group consisting of at least: name, deadline, color, icon, status, importance, and urgency; said storage also containing descriptions of information objects related to each project listed in said group of projects; said information objects selected from a group consisting of at least: computer files and folders, computer applications, electronic
      - 10 documents and their parts, web pages, computer network addresses, electronic messages, computer network transmissions, computer network connections, computer device descriptions, computer preferences and settings, user identities, user profiles and accounts, computer system-generated reports and collections, user interface components, virtual reality objects, electronic images, computer models, and personal information management
        - 15 system entries;
          - indicating one project of said group of projects as an active project;
          - detecting, through a first detecting means, an event generated by one of at least one computer application and at least one operating system when a user-action is carried out with at least one information object, the user-action selected from a list consisting of at least:
            - 20 creating, deleting, activating, inactivating, selecting, deselecting, opening, closing, viewing, sending, receiving, downloading, uploading, accessing over network, sharing, archiving, printing out, playing, pausing, saving, copying, moving, modifying, or editing said at least one information object;
            - detecting, through a second detecting means, a project, which is active at the time
              - 25 when said event is generated;
              - detecting, through a third detecting means, whether at least one of the information objects described in said event is contained in a list of information objects related to said active project:
                - and if said at least one information object described in said event is not contained in
                  - 30 said list of information objects related to said active project, then adding a description of said at least one information object to said list of information objects related to said active project;
                  - viewing and editing lists of project-related information objects;
                  - opening an information object from a list of project-related information objects;
                  - whereby an organization and accumulation of information objects related to
                    - 35 individual projects of a user is accomplished in the computer system, thus enabling the user to directly access project-related information objects when work on a project is resumed after an intermission.

2. A method according to claim 1, comprising detecting an event generated upon a user-action being carried out through first detecting means and through second detecting means further detecting which project is active when the event is generated and further comprising the step of:

5           creating an entry to a database containing interaction history, said entry comprising at least: time of the event, type of user-action, information object or objects used, and the project, which is active at the time of the event;

              whereby identifying a sub-set of entries in the interaction history database, linked to an individual project, enables a user to update, modify, or generate a list of information  
10       objects related to said individual project, through an updating, modifying, or generating means.

3. A method according to claim 2, comprising manual viewing and editing of entries in the interaction history database.

4. A method according to claim 2, further comprising editing of entries in the  
15       interaction history database through manual editing or algorithm-based processing, and storing both unedited and edited versions of the interaction history in a computer memory.

5. A method according to claim 2, further comprising the step of:  
              visualizing information in the interaction history database as statistical charts and  
20       timeline or timelines.

6. The method according to claim 2, further comprising the step of:  
              processing the interaction history database by converting a pre-processed sequence of three or more identical events into a processed sequence, said processed sequence containing the first and the last events of the pre-processed sequence.

25       7. A method according to claim 2, further comprising the steps of:  
              assigning ranks to project-related resources, wherein

              resources accessed with a frequency, which exceeds a predetermined value, are assigned a higher rank than a default rank assigned to a resource accessed once;

              edited and saved documents, bookmarked web pages, manually entered URLs,  
30       answered messages, messages marked as important, renamed folders, and folders, in which files are saved, are assigned a still higher rank;

              resources opened for less than a first predetermined amount of time are assigned a rank, lower than a default rank assigned to a resource accessed once; and

              resources not used for more than a second predetermined amount of time are  
35       assigned a rank, lower than a default rank assigned to a resource accessed once; and

selectively displaying resources with predetermined ranks as directly displayed on lists of project-related resources and other resources being displayed, indirectly, if an additional operation is carried out; and

5 setting options for directly and indirectly displaying project-related resources with different ranks.

8. A method according to claim 2, comprising manual viewing and editing of a part of the interaction history database related to an indicated project-related resource, such as a file, a computer folder, a URL, a message, or an email address, said part of the interaction history database displayed as a text, a statistical chart, or timeline diagram representing the  
10 use of the said indicated resource in one or several projects.

9. A method according to claim 2, further comprising the step of:  
displaying visual clues indicating for how long individual projects are not active.

10. A method according to claim 1, further comprising the step of:  
providing a personal information management system comprising tools selected  
15 from the group consisting of at least: calendar, To Do lists, and notes; wherein entries to the personal information management system are linked to projects, which are active when the entries are being made.

11. A method according to claim 1, further comprising the step of:  
displaying one of a minimized and a maximized view of project description and  
20 personal information management tools; and  
switching between the minimized and the maximized views selectively at command.

12. A method according to claim 10, further comprising the step of:  
displaying project-related information in a calendar in a color associated with a given  
project.

25 13. A method according to claim 10, comprising manually creating a description of a project and further comprising the steps of  
creating a description of parts of the project or subtasks; and  
marking one of the subtasks as the active subtask.

14. A method according to claim 13, further comprising the steps of:  
30 relating project-related information objects and personal information management system entries to specific subtasks, which are active when said resources are used and said entries are made; and

if no subtask is selected, then displaying all project-related information objects and personal information management system entries, and if a subtask is selected, then  
35 displaying only those project-related information objects and personal information management system entries, which are related to the said subtask.

15. A method according to claim 1, further comprising the steps of:

providing personal information management tools selected from the group consisting of at least: calendar, To Do lists, and notes; wherein entries to said personal information management system are linked to projects, which are active when said entries are being made; and

5           creating an entry to a database containing interaction history when a user-action is carried out with an information object, wherein said entry at least comprises one of: time of the event, type of user-action, information object or objects used, and the project, which is active at the time of the event.

16. A method according to claim 1, further comprising the steps of:

10           generating through document generating means a document containing a description of a specific project, said project description containing information types selected from a group consisting of at least: project name, project deadline, a description of project color, a description of project icon, a list of project's sub-projects with their respective deadlines, whether the project is completed or not, names of project-related files and folders,  
15           a list of project-related URLs, a list of project-related email addresses, headers of recent or all messages sent within the project, list of all or recent events in project's interaction history, a statistical description of project's interaction histories, project-related notes and To Do entries, project-related calendar entries; and

20           selectively defining, which types of information to be included in a project description.

17. A method according to claim 15, further comprising the step of:

25           coloring areas of a calendar view representing time units, such as days, weeks, or months, of a predetermined period in the past with colors associated with the projects worked on during said time units, wherein the proportion of the area colored in a project's color is substantially proportional to the amount of time spent on that project.

18. A method according to claim 1, further comprising the steps of:

30           detecting the subset of project-specific resources of an active project, which are open at the moment when the project becomes not active; and  
              storing a description of the subset of project-related information objects in computer memory; and

              when the project becomes active again, providing means for opening the subset of project-related information objects corresponding to said memory-stored description.

19. A method according to claim 1, further comprising the steps of:

35           creating at least one computer folder, and  
              moving or copying all or part of project-related computer files and folders to said at least one computer folder, or placing shortcuts to all or part of project-related computer files and folders to said at least one computer folder.

20. A method according to claim 15, further comprising the step of:

organizing all or part of project-related information objects related to one or more projects, copies of the information objects, or links to the information objects, in at least one predetermined computer folder for subsequent distribution of work between several devices, which at least one work distribution computer folder is then copied to a memory storage device, sent over a computer network, or synchronized with another computing device; and wherein the work on a project is coordinated employing a variety of computer devices.

21. A method according to claim 20, further comprising the steps of:

detecting if new information objects have been added to existing information objects or updated in at least one work distribution computer folder; and

if there are new or updated information objects in the at least one work distribution computer folder, then adding, creating or updating events to an interaction history database and updating lists of project-related information objects.

22. A method according to claim 1, further comprising the steps of:

organizing project-related information objects into sets, the sets being selected from the group consisting of at least: applications, documents, folders, URLs, messages, and contacts; and

viewing and editing the sets separately.

23. A method according to claim 1, further comprising the step of:

indicating a set of information objects, which information objects should be ignored and not added to lists of project-related information objects when a user-action involving one or more information objects from the said set of information objects is carried out.

24. A method according to claim 1, further comprising the steps of:

marking a project-related information object or information objects as bound to a specific project; and

activating the specific project when a bound information object is selected.

25. A method according to claim 24, comprising marking a project-related information object or information objects as bound to a specific project and further comprising the step of:

displaying, when a bound information object is selected, a dialog window and providing means for selecting at least one of: (a) making the project, to which the bound information object is linked, active, (b) accessing the bound information object without making changes as to which project is active, and (c) canceling access to the bound information object.

26. A method according to claim 1, further comprising the steps of:

assigning ranks to project-related information objects; and

displaying lists of project-related information objects, so that information objects having the same rank are displayed as grouped together.

27. A method according to claim 1, wherein items on lists of project-related information objects are displayed as objects located in a two-dimensional or three-dimensional space.

28. An apparatus for providing low-overhead integrated support for information management to a user of a computer system, comprising:

memory-storage creating means for creating memory storage containing descriptions of a group of projects, wherein the descriptions comprise one or more properties, wherein the properties are selected from a group consisting of at least: name, deadline, color, icon, status, importance, and urgency; said memory storage containing a description of information objects related to the project in a list of project-related resources; said information objects being of a type selected from a group consisting of at least: computer files and folders, computer applications, electronic documents and their parts, web pages, computer network addresses, electronic messages, computer network transmissions, computer network connections, computer device descriptions, computer preferences and settings, user identities, user profiles and accounts, computer system-generated reports and collections, user interface components, virtual reality objects, electronic images, computer models, and personal information management system entries;

means for indicating one project from the group of projects as an active project;

first detecting means for detecting an event generated by one of at least one computer application and at least one operating system when a user-action is carried out with an information object, the user-action is selected from a list consisting of at least: creating, deleting, activating, inactivating, selecting, deselecting, opening, closing, viewing, sending, receiving, downloading, uploading, accessing over network, sharing, archiving, printing out, playing, pausing, saving, copying, moving, modifying, or editing said information object;

second detecting means for detecting a project, which is active at the time when said event is generated;

third detecting means for detecting whether at least one of information objects described in said event is contained in a list of project-related resources associated with said active project;

and if said at least one information object described in said event is not contained in said list of information objects related to said active project, then adding a description of said at least one information object to said list of information objects related to said active project;

means for viewing and editing lists of project-related information objects; and

means for opening an information object from a list of project-related information objects.

29. An apparatus according to claim 28, further comprising:

personal information management system tools selected from the group consisting of at least: calendar, To Do lists, and notes; wherein entries to the personal information management system are linked to projects, which are active at the time the entries are being made.

30. An apparatus according to claim 28, further comprising:

means for creating an entry to a database containing interaction history when a user-action is carried out, wherein the entry comprises at least: time of the event, type of user-action, information object or objects used, and the project, which is active at the time of the event.

31. An apparatus according to claim 30, further comprising:

means for viewing and editing entries in the interaction history database.

32. An apparatus according to claim 28, further comprising:

means for detecting the subset of project-specific information objects of an active project, which are open at the moment when the project becomes not active;

means for storing a description of the subset of project-related information objects in a computer memory; and

when the project becomes active again, providing means for opening the subset of project-related information objects corresponding to the memory-stored description.

33. An apparatus according to claim 28, further comprising:

means for creating at least one computer folder linked to a certain project and moving or copying all or part of project-related files to said at least one computer folder, or placing shortcuts to all or part of project-related files to said at least one computer folder.

34. An apparatus according to claim 28, further comprising:

means for creating a memory storage and storing all or part of information objects related to one or several projects in said storage;

means for copying, moving, or sending information contained in said storage to another memory storage, another computing device, or over a computer network; and

wherein a user, more conveniently, can store and access information necessary for working on a project or projects while employing a variety of computer devices.